

# APICAL

INDUSTRIES, INC.

ENGINEERING CHANGE NOTICE NO. 04592

SHEET 1 OF 1

DWG NO. 647.1300

REV: C

PREPARED BY:

J. BECKER

DATE: 06/19/14

EFFECT ON DWG  
☐ INC. ☒ UNINC.

DWG TITLE: EC145 CABLE CUTTERS KIT

APPROVED BY:

ENGR

MFG

QC

EFF:

CURRENT STOCK

TRANSACTION CODES (TC):  
A-ADD C-CREATE  
R-REVISE D-DELETE

REASON: REVISED BOM.

## ACTION LIST:

1. ADD F/N 11 TO ALL CURRENT KITS IN STOCK
2. UPDATE III145-2 & ICA145-2

Superseded

11	R	647.0112	8	8			STRUT BRACKET		
F/N	TC	PART NUMBER	.1306	.1305	.1304	.1303	DESCRIPTION	MATERIAL	SPECIFICATION
QTY									
DOCUMENTS EFFECTED:							CHANGE CATEGORY	DER REVIEW REQUIRED	
<input type="checkbox"/> MDL <input checked="" type="checkbox"/> INSTALL INSTRUC <input checked="" type="checkbox"/> ICA <input checked="" type="checkbox"/> BOM							<input type="checkbox"/> MAJOR <input checked="" type="checkbox"/> MINOR	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	

<b>APICAL</b>  INDUSTRIES, INC.	ENGINEERING CHANGE NOTICE NO. 04485				SHEET 1 OF 1	
	DWG NO. 647.1300	REV: C	PREPARED BY J. SOTO	DATE: 04/04/2014		EFFECT ON DWG <input type="checkbox"/> INC. <input checked="" type="checkbox"/> UNINC.
	DWG TITLE: EC 145 CABLE CUTTERS KIT					
	APPROVED BY:	ENGR <i>[Signature]</i>	MFG <i>[Signature]</i>	QC <i>[Signature]</i>	EFF. NEXT ORDER	
TRANSACTION CODES (TC): A-ADD C-CREATE R-REVISE D-DELETE	REASON: REVISED F/N 62.					ECR: D-14-02

Superseded

62	R	601.3008	2	2	2	2	INSERT	NAS1834C3-300	
F/N	TC	PART NUMBER	.1306	.1304	.1303	.1301	DESCRIPTION	MATERIAL	SPECIFICATION
			QTY						
DOCUMENTS EFFECTED:							CHANGE CATEGORY	DER REVIEW REQUIRED	
<input type="checkbox"/> MDL <input type="checkbox"/> INSTALL INSTRUCTIONS <input type="checkbox"/> ICA <input type="checkbox"/> FMS <input checked="" type="checkbox"/> BOM							<input type="checkbox"/> MAJOR <input checked="" type="checkbox"/> MINOR	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	

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NOTES: UNLESS OTHERWISE SPECIFIED

- 1 AFTER INSTALLATION, APPLY F/N 73 A/R TO FILL GAPS AND FILLET EDGES
2. APPLY F/N 74 TO FAYING SURFACES
- 3 AT CUSTOMERS OPTION, INSTALL F/N 77 BY MATCH DRILLING ONTO F/N 1
- 4 INSTALL FOR 647.1301, 647.1302.
- 5 INSTALL FOR 647.1304, 647.1305.
- 6 APPLICABLE WHEN EUROCOPTER P/N 145-250014.11 IS INSTALLED WITH EUROCOPTER CABLE CUTTER FIXED PROVISIONS.
- 7 APPLICABLE WHEN REPLACING EUROCOPTER P/N 145-250074.11

UNINCORPORATED ECN(s)

04485, 04592

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
	LAST PROTOTYPE REVISION: PR3		N/C
N/C	INITIAL RELEASE	08/05/09	P. BRAVO
A	INCORPORATED ECN 02963, 03020, 03048	01/25/11	P. BRAVO
B	INCORPORATED ECN 03919	07/05/13	P. BRAVO
C	INCORPORATED ECN 04059	08/13/13	P. BRAVO

13		13	13		13	26	647.1812	SHIM		
4		4	4		4	25	647.1910	CLIP		
1		1	1		1	24	647.1810	NOSE DOOR DOUBLER		
1		1	1		1	23	647.1818	NOSE DOOR SPACER		
2		2	2		2	22	647.1813	ANGLE		
1		1	1		1	21	647.1913	TEE		
1		1	1		1	20	647.1814	GUSSET, LH		
1		1	1		1	19	647.1815	GUSSET, RH		
1		1	1		1	18	647.1915	SUPPORT ANGLE		
	2	2		2	2	17	647.2011	LOWER STRUT		
1		1	1		1	16	647.1914	BRACKET		
1		1	1		1	15	647.1816	SUPPORT, LH		
1		1	1		1	14	647.1817	SUPPORT, RH		
1		1	1		1	13	647.1912	BRACKET, LH		
1		1	1		1	12	647.1911	BRACKET, RH		
4		4	4	4	8	11	647.0112	STRUT BRACKET		
				1	1	10	647.2110	LOWER RAIL		
			1		1	9	647.2111	UPPER RAIL		
1		1	1		1	8	647.1610	WIPER DEFLECTOR, FWD		
1		1	1		1	7	647.1601	WIPER DEFLECTOR ASSY, AFT		
				2	2	6	647.1701	SKID DEFLECTOR ASSY		
1		1	1		1	5	647.3201	GROUNDING CABLE ASSY		
1		1	1		1	4	647.2201	CROSS ASSY		
1		1	1		1	3	647.1602	DOUBLER ASSY		
	1	1		1	1	2	647.1402	CUTTER ASSY (LOWER)		
				1	1	1	647.1401	CUTTER ASSY (UPPER)		
X	X						647.1306	FIXED PROVISIONS KIT U CHANNEL		
	X						647.1305	REMOVABLE PROVISIONS KIT U CHANNEL	6	
		X					647.1304	EC145 CABLE CUTTERS KIT U CHANNEL COMPATIBLE	6	
			X				647.1303	FIXED PROVISIONS KIT		
				X			647.1302	REMOVABLE PROVISIONS KIT		
					X		647.1301	EC145 CABLE CUTTERS KIT		
.1306	.1305	.1304	.1303	.1302	.1301	FIND #	PART #	DESCRIPTION	MAT'L	SPEC.

BOM Table (Restructured)

QTY		PARTS LIST	
NEXT ASSY (S)		ORIGINAL DATE (MO-DA-YR) 07/06/09	APICAL INDUSTRIES
		DRAWN BY R. ROSANO	2608 TEMPLE HEIGHTS DR.
		CHECKER D. BARKER	OCEANSIDE, CA. 92056-3512 (760)724-5300
		DRAWING APPROVAL P. BRAVO	EC145 CABLE CUTTERS KIT
		08/05/09	
		CONTRACT No.	
		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 2 PLACE DECIMALS ±.03 3 PLACE DECIMALS ±.010 ANGLES ±.5°	SIZE B
			CAGE CODE 07MZ6
			DWG. NO. 647.1300
			REV. C
			SCALE NONE
			SHEET 1 OF 9

Superceded

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	2	2				85	647.1702	SKID DEFLECTOR ASSY	△	
	1	1				84	647.2113	LOWER RAIL (U CHANNEL KIT)		
	8	8				83	601.3655	WASHER	LN9025-0820K	
	8	8				82	601.3654	SCREW	LN9037-8018	
1		1				81	647.2112	UPPER U CHANNEL		
	4	4				80	601.3653	WASHER	93475A270	
	2	2				79	601.3652	LOCKNUT	93625A300	
	2	2				78	601.3651	SCREW	91292A080	
	1	1				77	647.1403	CUTTER ASSY (UPPER U CHANNEL)		
	5	5				76	601.3650	BOLT	AN3-15A	
REF			REF	REF	REF	75	647.5701	GPS MOUNT KIT	△	
2		2	2		2	74	601.1954	SCREW	MS27039-1-17	
	2	2		2	2	73	647.2010	UPPER STRUT		
	1	1		1	1	72	601.2045	RTV	LOCTITE 598	
1		1	1		1	71	600.1012	SEALANT	PR-1425 CLASS B	
1		1	1		1	70	600.0991	MAGNOBOND 6398 PART B		
1		1	1		1	69	600.0990	MAGNOBOND 6398 PART A		
4		4	4		4	68	601.3012	SCREW	MS27039-1-15	
2		2	2		2	67	601.3004	CAMLOC STUD		
2		2	2		2	66	601.3005	CAMLOC RETAINER		
2		2	2		2	65	601.3006	CAMLOC RECEPTACLE		
3 FT.		3 FT.	3 FT.		3 FT.	64	601.3011	P-SEAL		
1.1 FT.		1.1 FT.	1.1 FT.		1.1 FT.	63	601.3007	GROMMET	MS21266-2N	
2		2	2		2	62	601.3008	INSERT	NAS1834C-300	
11		11	11		11	61	601.2991	RIVET	CR3213-4-6	
2		2	2		2	60	601.1039	RIVET	CR3213-4-2	
8		8	8		8	59	601.1183	RIVET	CR3213-4-5	
.1306	.1305	.1304	.1303	.1302	.1301	FIND #	PART #	DESCRIPTION	MAT'L	SPEC.
BOM Table(Restructured)										

22		22	22		22	58	601.0790	RIVET		CR3213-4-3	
8		8	8		8	57	601.2995	RIVET		CR3213-6-6	
4		4	4		32	56	601.1915	RIVET		CR3213-4-4	
12		12	12		12	55	601.2207	NUTPLATE RIVET		CCR264SS-3-03	
4		4	4		4	54	601.1983	NUTPLATE RIVET		CCR274SS-3-03	
12		12	12		12	53	601.2980	NUTPLATE RIVET		CCR264SS-3-04	
12		12	12		12	52	600.0795	NUTPLATE		MS21047-3	
	4	4		4	4	51	601.3209	LOCKNUT		MS21042L4	
5	4	9	5	4	9	50	601.2973	LOCKNUT		MS21042-08	
29	17	46	29	16	45	49	601.2943	LOCKNUT		MS21042-3	
3		3	3		3	48	601.2375	WASHER			
10	8	18	10	8	18	47	601.2764	WASHER		NAS1149FN832P	
	70	32	70	32	102	46	601.1607	WASHER		NAS1149F0332P	
1		1	1		1	45	601.2525	SCREW		MS27039-0807	
4		4	4		4	44	601.1952	SCREW		MS27039-1-20	
	4	4		4	4	43	601.3010	SCREW		MS27039-0810	
4		4	4		4	42	601.3224	SCREW		AN525-10R12	
6		6	6		6	41	601.1365	SCREW		MS27039-1-10	
3		3	3		3	40	601.2198	SCREW		MS27039-1-07	
3		3	3		3	39	601.2999	SCREW			
18		18	18		18	38	601.2459	SCREW		MS27039C1-06	
4		4	4		4	37	601.1622	SCREW		MS27039-1-14	
10		10	10		10	36	601.2051	SCREW		MS24694C52	
2		2	2		2	35	601.2823	BOLT		AN3-4A	
1		1	1		1	34	601.1324	BOLT		AN4CH6A	
	2	2		2	2	33	601.1874	BOLT		AN3C10A	
	12	12		16	16	32	601.2826	BOLT		AN3-11A	
8		8	8		8	31	601.2638	WASHER		NAS1149F0432P	
4		4	4		4	30	601.3002	BOLT		NAS6604-66	
2		2	2		2	29	647.1811	SPACER			
4		4	4		4	28	647.2511	NUT			
4		4	4		4	27	647.2510	SLEEVE			
.1306	.1305	.1304	.1303	.1302	.1301	FIND #	PART #	DESCRIPTION	MAT'L	SPEC.	

BOM Table(Restructured)

ORIGINAL DATE	02-01-06
DRAWN BY	CHECKER
R. ROSANO	D. BARKER
DRAWING APPROVAL	
P. BRAVO 08/05/09	
CONTRACT NO.	
UNLESS OTHERWISE SPECIFIED	
DIMENSIONS ARE IN INCHES	
TOLERANCES ARE:	
2 PLACE DECIMALS ±.03	
3 PLACE DECIMALS ±.010	
ANGLES ±.5°	

APICAL INDUSTRIES			
2608 TEMPLE HEIGHTS DR.			
OCEANSIDE, CA. 92056-3512 (760)724-5300			
EC145 CABLE CUTTERS KIT			
SIZE	CAGE CODE	DWG. NO.	REV.
B	07MZ6	647.1300	C
SCALE NONE		SHEET 2 OF 9	

Superceded



1 2 3 4 5 6 7 8

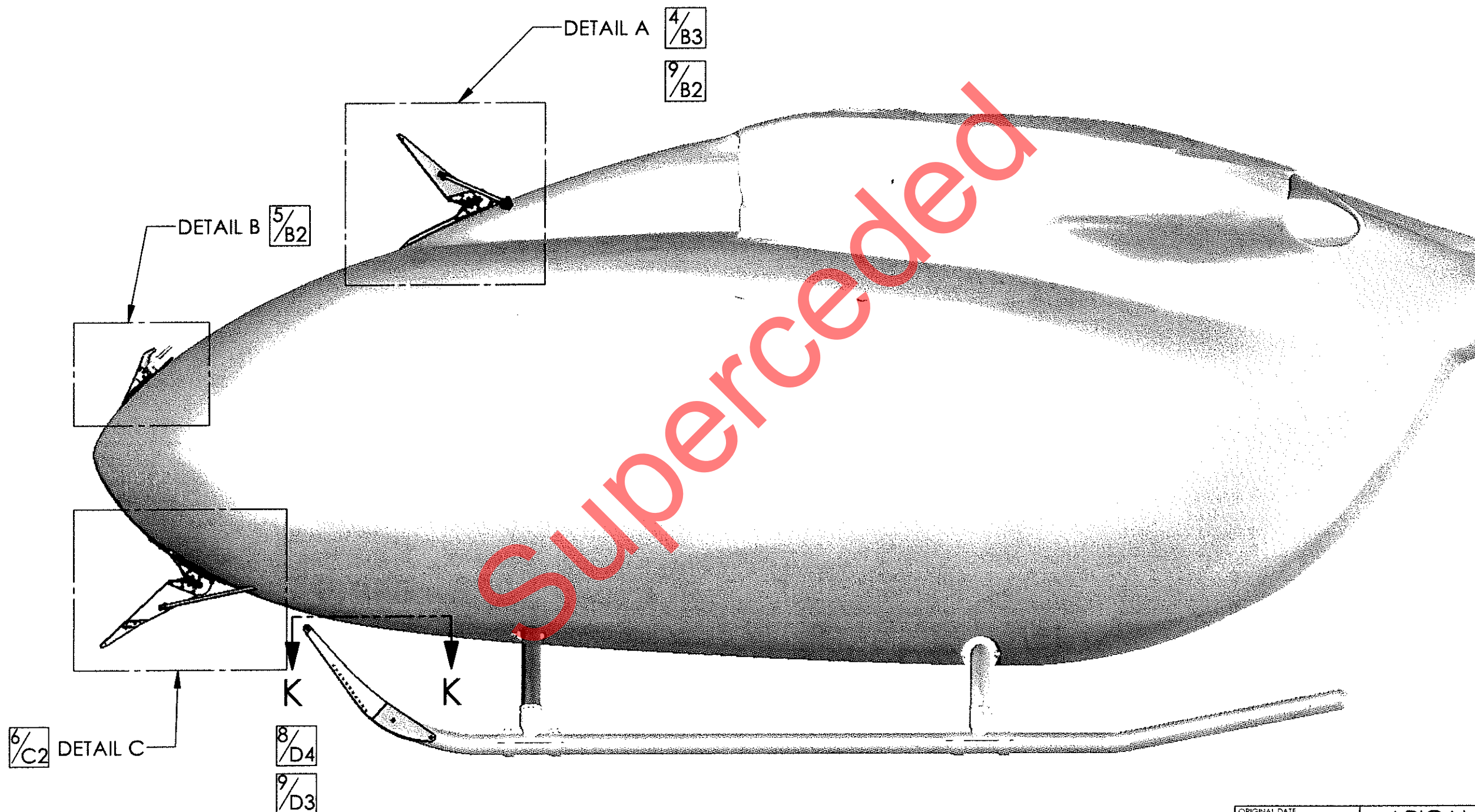
A

B

C

D

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ORIGINAL DATE (MO-DA-YR) 07/06/09		APICAL INDUSTRIES 2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760)724-5300	
DRAWN BY R. ROSANO	CHECKER D. BARKER		
DRAWING APPROVAL P. BRAVO 07/06/09		EC145 CABLE CUTTERS KIT	
CONTRACT No.		SIZE B	REV. C
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 2 PLACE DECIMALS ±.01 3 PLACE DECIMALS ±.005 ANGLES ±.5°		DWG. NO. 647.1300	SCALE NONE
		SHEET 3 OF 9	

Superceded



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SECTION A-A

SECTION B-B

SECTION L-L

DETAIL A 3/B3

DETAIL D 8/B5

11 4 PL

32 4 PL

46 8 PL

49 4 PL

57 8 PL

36 10 PL

46 10 PL

49 10 PL

74 2 PL

46 4 PL

49 2 PL

33 2 PL

46 4 PL

49 2 PL

38 6 PL

46 6 PL

12

13

14

15

38 12 PL

46 24 PL

49 12 PL

73 2 PL

42 2 PL

47 4 PL

50 2 PL

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APICAL INDUSTRIES

2608 TEMPLE HEIGHTS DR.

OCEANSIDE, CA. 92056-3512 (760)724-5300

EC145 CABLE CUTTERS KIT

ORIGINAL DATE 07/06/09

DRAWN BY R. ROSANO

CHECKER D. BARKER

DRAWING APPROVAL P. BRAVO

CONTRACT NO.

UNLESS OTHERWISE SPECIFIED

DIMENSIONS ARE IN INCHES

TOLERANCES ARE

2 PLACE DECIMALS ±.01

3 PLACE DECIMALS ±.005

ANGLES ±.5°

SIZE B

CAGE CODE 07MZ6

DWG. NO. 647.1300

REV. C

SCALE NONE

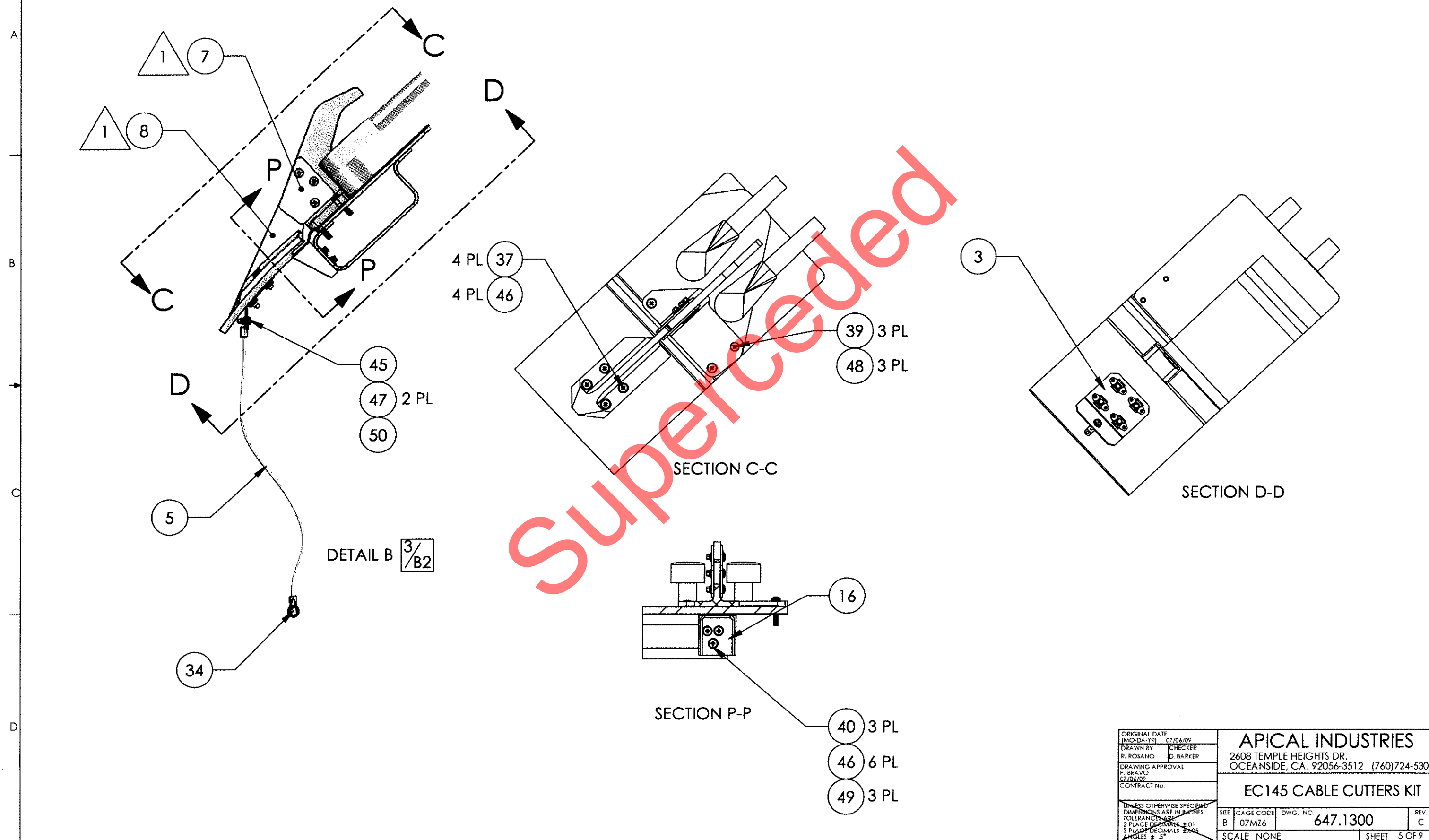
SHEET 4 OF 9

<b>APICAL INDUSTRIES</b>			
2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760)724-5300			
<b>EC145 CABLE CUTTERS KIT</b>			
SIZE	CAGE CODE	DWG. NO.	REV.
B	07MZ6	647.1300	C
SCALE NONE			SHEET 4 OF 9

UNLESS OTHERWISE SPECIFIED  
DIMENSIONS ARE IN INCHES  
TOLERANCES ARE:  
2 PLACE DECIMALS  $\pm .01$   
3 PLACE DECIMALS  $\pm .005$   
ANGLES  $\pm .5^\circ$

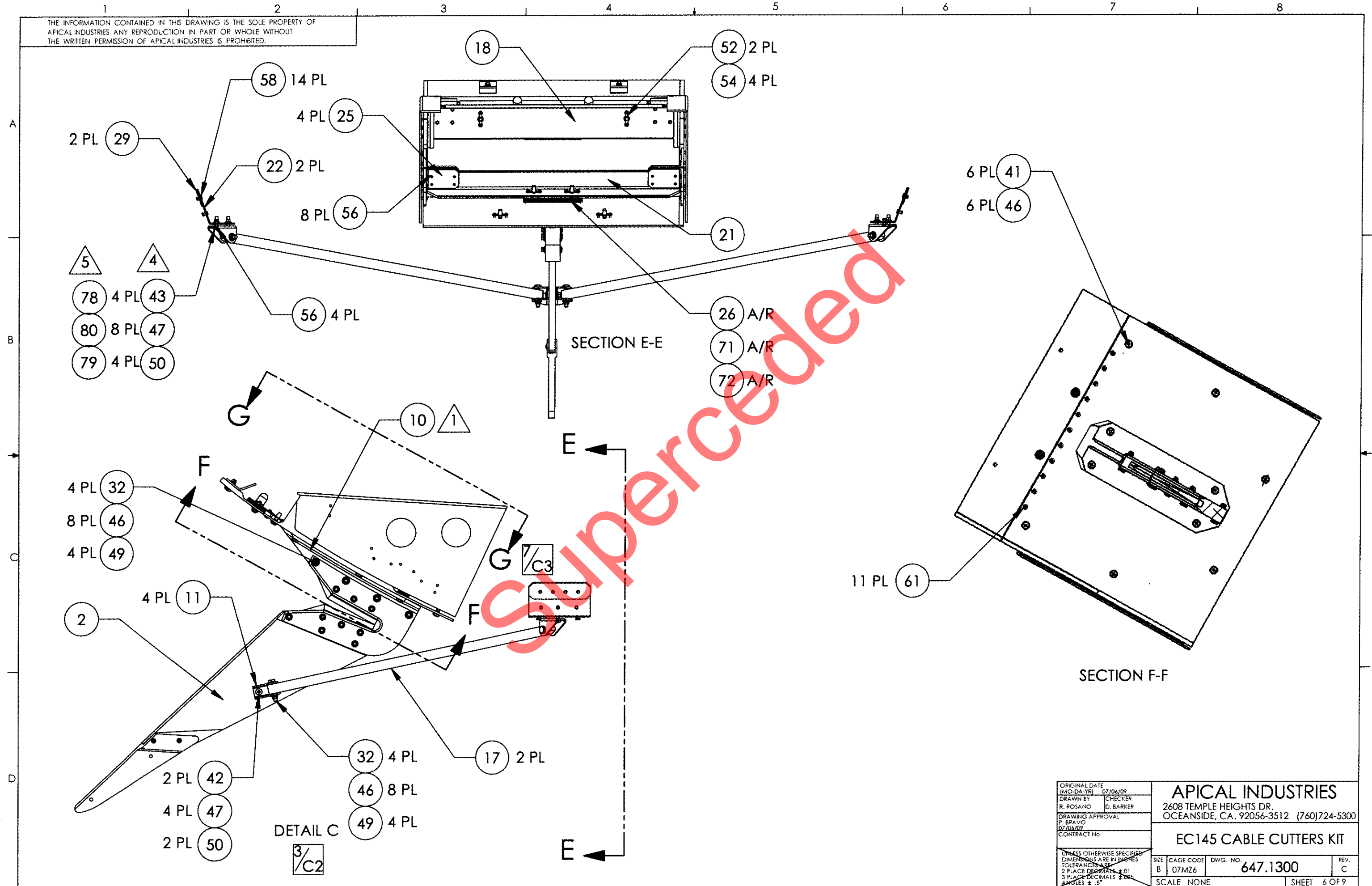
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ORIGINAL DATE (MO-DA-YR) 07/06/09		APICAL INDUSTRIES	
DRAWN BY R. ROSANO	CHECKER D. BARKER	2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760)724-5300	
DRAWING APPROVAL P. BRAVO 07/06/09		EC145 CABLE CUTTERS KIT	
CONTRACT No.		SIZE B	REV. C
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 2 PLACE DECIMALS ±.01 3 PLACE DECIMALS ±.005 ANGLES ±.5°		CAGE CODE 07MZ6	DWG. NO. 647.1300
SCALE NONE		SHEET 6 OF 9	

Superceded



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SECTION G-G  $\frac{6}{C3}$

SECTION H-H

SHOWN 19  
OPPOSITE 20

4 PL 55  
2 PL 60  
2 PL 64  
2 PL 67  
2 PL 66  
2 PL 65  
2 PL 62  
2 PL 44 OR 70  
2 PL 46  
52 8 PL  
53 12 PL  
56 4 PL  
56 16 PL  
59 8 PL  
44 OR 70 2 PL  
46 2 PL

8/B2

6/C3

Superceded

ORIGINAL DATE (MO-DA-YR) 07/06/09		APICAL INDUSTRIES 2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760)724-5300	
DRAWN BY R. ROSANO		CHECKER D. BARKER	
DRAWING APPROVAL P. BRAVO 07/06/09		CONTRACT No.	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 2 PLACE DECIMALS $\pm .01$ 3 PLACE DECIMALS $\pm .005$ ANGLES $\pm .5^\circ$		SIZE B	CAGE CODE 07M26
		DWG. NO. 647.1300	REV. C
		SCALE NONE	SHEET 7 OF 9

4 PL (55)

2 PL (60)

8/B2

56 4 PL

2 PL (64)

2 PL (67)

2 PL (66)

2 PL (65)

23 1

2 PL (62)

2 PL (44) OR (70)

2 PL (46)

59 8 PL

56 16 PL

44 OR (70) 2 PL

46 2 PL

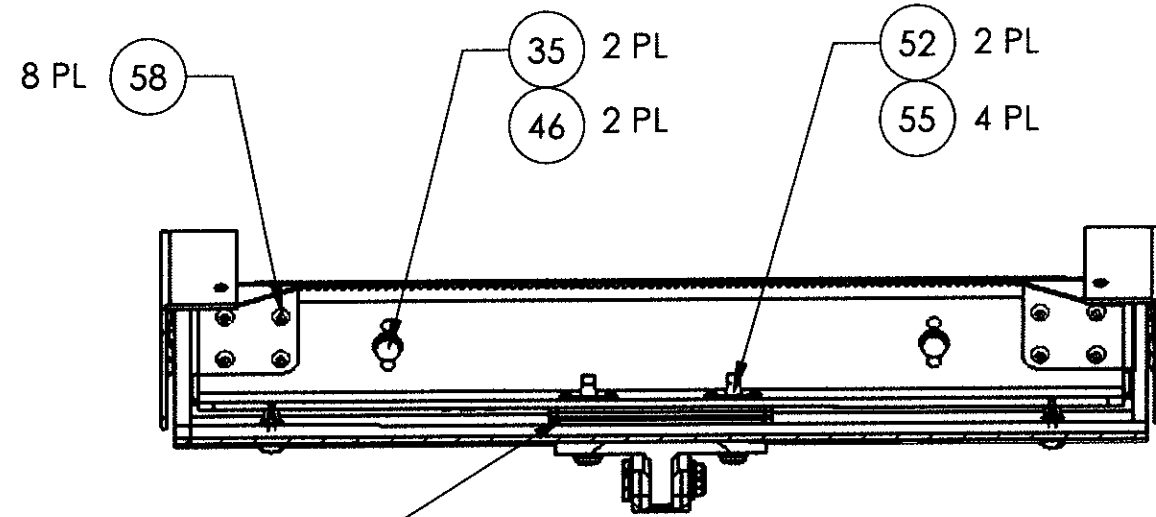
SECTION H-H

SECTION G-G 

ORIGINAL DATE (MO-DA-YR) 07/06/09	APICAL INDUSTRIES		
DRAWN BY R. ROSANO	2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760)724-5300		
CHECKER D. BARKER			
DRAWING APPROVAL P. BRAVO 07/06/09	EC145 CABLE CUTTERS KIT		
CONTRACT NO.			
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 2 PLACE DECIMALS ±.01 3 PLACE DECIMALS ±.005 ANGLES ± .5°	SIZE B	CAGE CODE 07M26	DWG. NO. 647.1300
	SCALE NONE		REV. C
	SHEET		7 OF 9

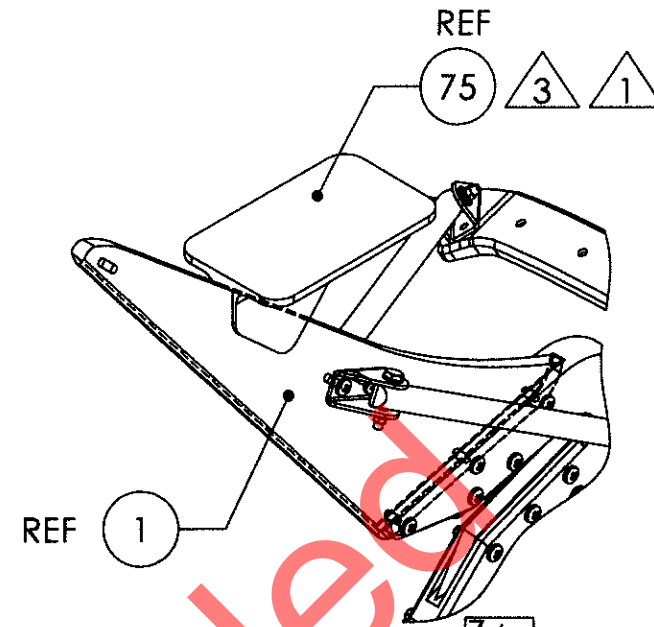
Superceded

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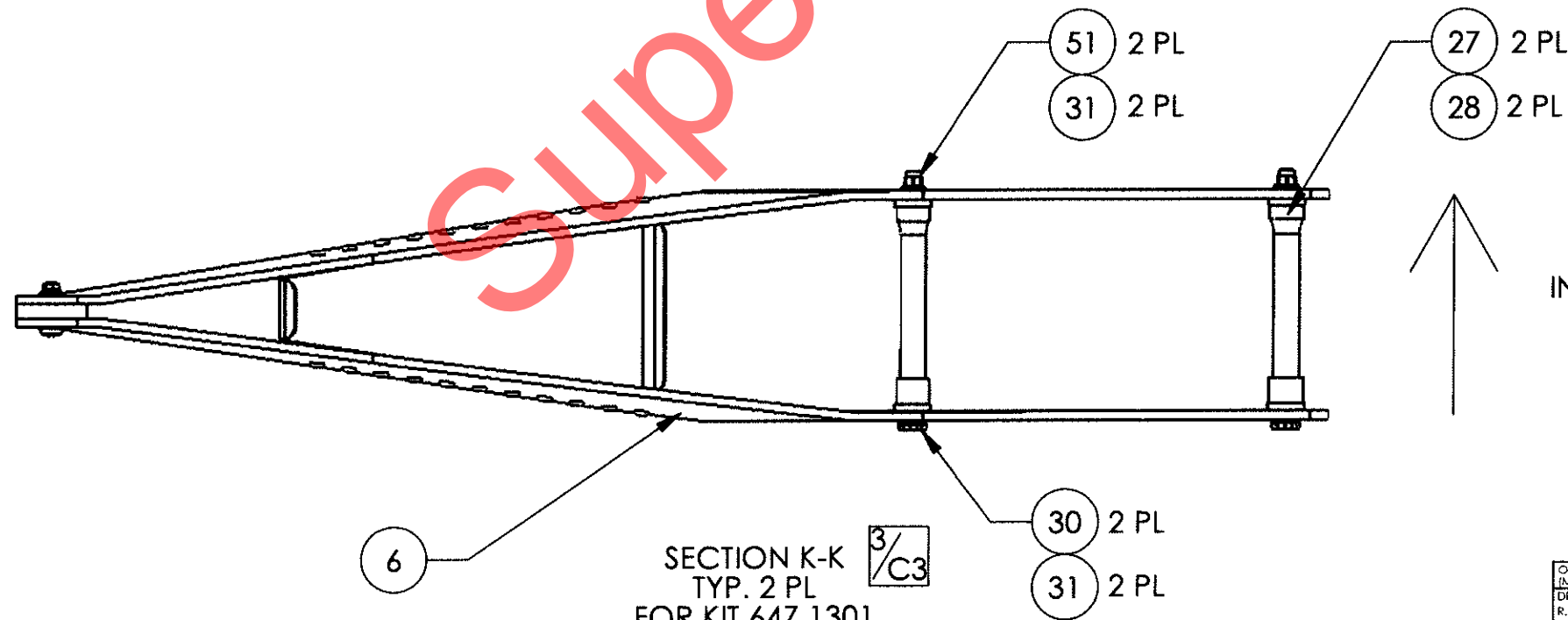


A/R (26)  
A/R (71)  
A/R (72)

SECTION O-O  $\frac{1}{A6}$



DETAIL D  $\frac{1}{A6}$   
SHOWN ISOMETRICALLY  
TYPICAL GPS MOUNT KIT INSTALLATION



↑ INBOARD

SECTION K-K  $\frac{3}{C3}$   
TYP. 2 PL  
FOR KIT 647.1301

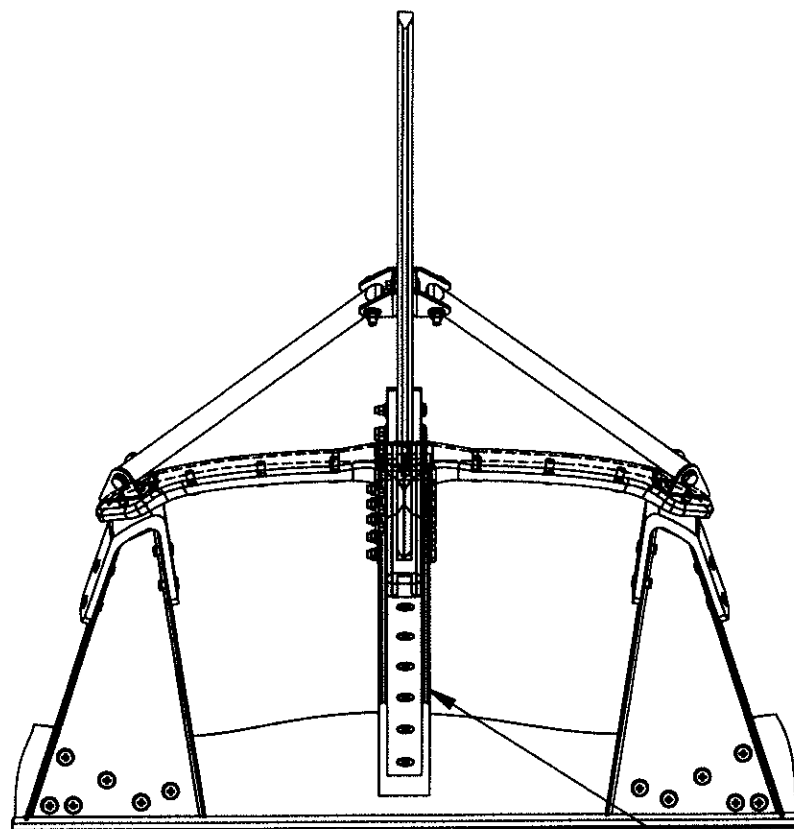
ORIGINAL DATE (MO-DA-YR) 07/06/09  
DRAWN BY R. ROSANO  
CHECKER D. BARKER  
DRAWING APPROVAL P. BRAVO  
07/06/09  
CONTRACT NO.

UNLESS OTHERWISE SPECIFIED  
DIMENSIONS ARE IN INCHES  
TOLERANCES ARE:  
2 PLACE DECIMALS  $\pm 0.01$   
3 PLACE DECIMALS  $\pm 0.005$   
ANGLES  $\pm 5^\circ$

APICAL INDUSTRIES  
2608 TEMPLE HEIGHTS DR.  
OCEANSIDE, CA. 92056-3512 (760)724-5300  
EC145 CABLE CUTTERS KIT  
SIZE B CAGE CODE 07MZ6 DWG. NO. 647.1300 REV. C  
SCALE NONE SHEET 8 OF 9

Superceded

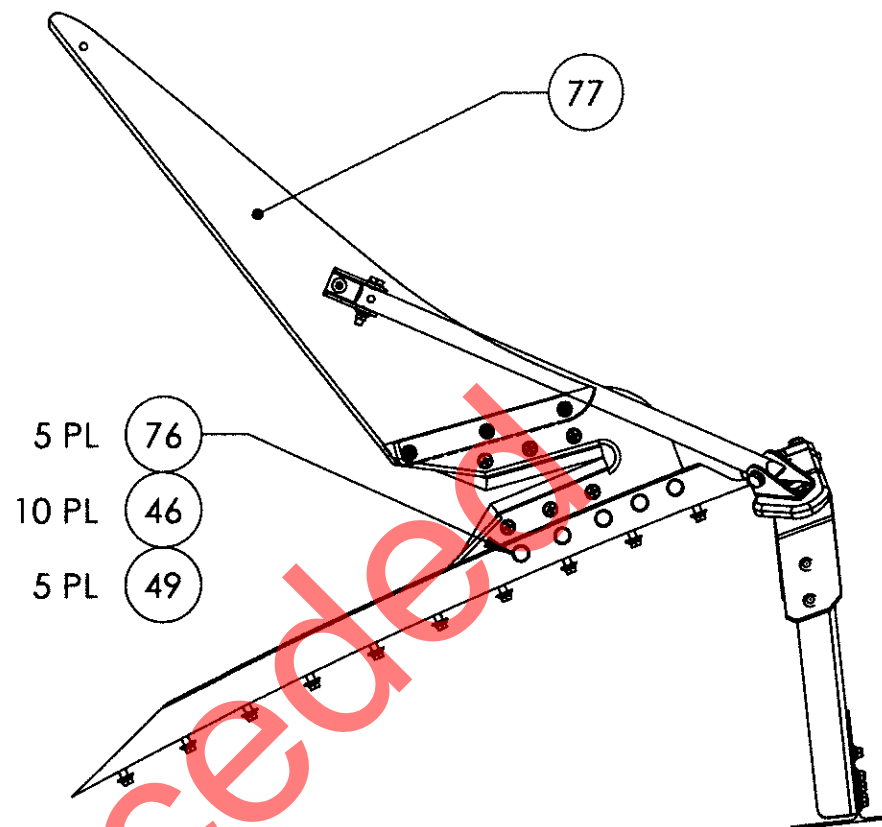
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DETAIL A  
WITH U CHANNEL

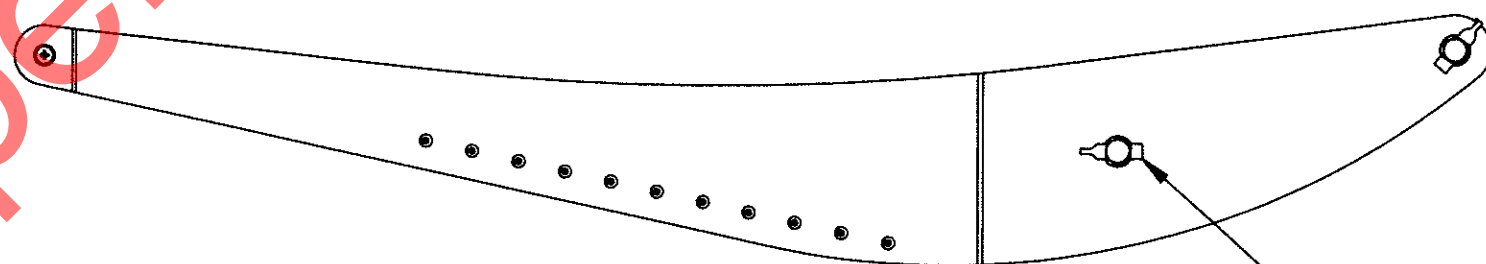
84

3/B3

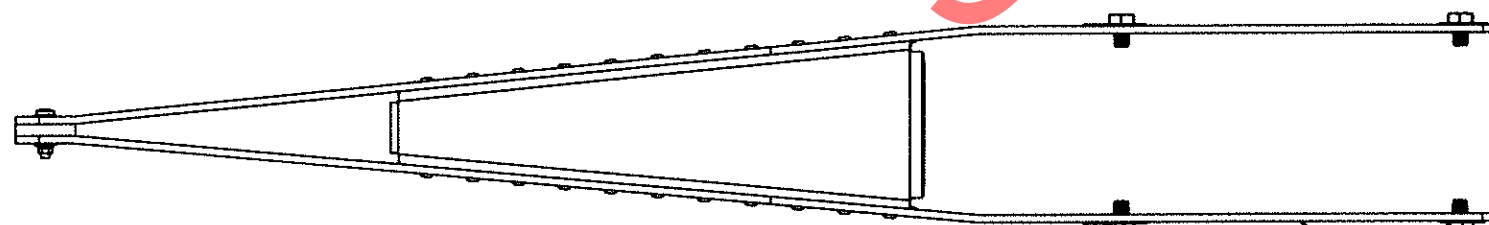


5 PL 76  
10 PL 46  
5 PL 49

77



83 4 PL



4 PL 82  
647.1702  
DETAIL K  
ALTERNATE CONFIGURATION

3/D3

7

ORIGINAL DATE (MO-DA-YR) 07/06/09		APICAL INDUSTRIES	
DRAWN BY R. ROSANO	CHECKER D. BARKER	2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760)724-5300	
DRAWING APPROVAL P. BRAVO 07/06/09		EC145 CABLE CUTTERS KIT	
CONTRACT NO.		SIZE B	REV. C
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 2 PLACE DECIMALS ±.01 3 PLACE DECIMALS ±.005 ANGLES ±.5°		CAGE CODE 07MZ6	DWG. NO. 647.1300
		SCALE NONE	SHEET 9 OF 9

Superceded